BLM LIBRARY
88081529

6610
Rev 10

Library 6610

~~1510~~ (932)

WSO LIBRARY

OCT 29 1976

Memorandum

To: DSC (D-512), Attn: Russell Fromholtz

From: State Director

Subject: Revisions of Wildlife Resource Inventory Contract for Vermillion Grazing EIS

Your memorandum dated October 5, 1976, Acknowledgement of Receipt of Requisition/Requirements, pertaining to the Wildlife Resource Inventory was not received in this office until October 21, 1976. Attached are our revisions based upon your comments.

We would like to use the Solicitation Evaluation Schedule, which you showed to Donald Seibert on October 1, 1976. Will you please contact Kenneth Brown, DSC Wildlife staff, for copies of Draft Manuals 6602 and 6840.

Robert O. Buffington

Attachment

DJSeibert:jac
10/28/76

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
1976 NOV 15 A 10:00
RECEIVED
CHEYENNE, WYOMING

WSO LIBRARY
S/F CODE 6610
COPY 1 OF 1

#15353487 49 ID:88081529

HD
243
.A6
V478
1976

Revisions based upon comments by Russ Fromholz
Dated October 2, 1976
and Received in Arizona State Office on October 21, 1976

CONTRACT FOR WILDLIFE RESOURCE INVENTORY OF THE VERMILLION GRAZING EIS AREA

I. Background

The geographic limits of the study areas are in the Arizona counties indicated below and shown on Attachment #1.

Vermillion EIS Area	Mohave County, Arizona Coconino County, Arizona

The majority of national resource land (NRL) in Arizona is grazed by livestock.

As a result of the agreement between the National Resources Defense Council and BLM and approved by the Court, BLM must complete an Environmental Impact Statement in accordance with the requirements of the National Environmental Policy Act (NEPA) on all areas of NRL potentially suitable for livestock grazing. This EIS should include the effects of livestock grazing on endangered and threatened animals, non-game animals, and game animals.

BLM administers grazing on about 11,900,000 acres of NRL in Arizona. This contract is to initiate the first phase of the intensive wildlife inventories on ~~the Cerbats (1,235,000 acres) and~~ the Vermillion (1,341,000 acres).

Court

II. Objectives

In relation to the EIS areas, the Contractor shall:

(a) Determine and document the presence or absence of specified wildlife species.

(b) Gather, analyze and report baseline population and life history information concerning wildlife species known or suspected to exist in the EIS areas.

(c) Analyze and document habitat characteristics in light of the habitat requirements of wildlife species known or suspected to exist in the EIS areas.

(d) Provide scientific information to be used by the BLM to ensure compliance with all Federal and State legislation relating to Endangered and Threatened Wildlife species inhabiting the EIS area.

III. Statement of Work

A. Elements and Description

1. Task Statement

a. General

(1) BLM Draft Manual 6602 (hereafter referred to as 6602) is a part of this contract. The procedures described in 6602 will be used to conduct the habitat inventory. Original copies of the forms required in 6602 to conduct the inventory will be furnished by the Government. Additional copies of the needed forms will be reproduced by the Contractor of at the Contractor's expense. 6602 requires inventoring habitat types (range sub-types) within plant associations as defined by A.W. Kuchler, 1964 and 1975 maps, and delineating habitat types on aerial photograph scale 1:31,680 or equivalent for good resolution. Ground truth sampling within each habitat type will be conducted. A minimum of one transect per habitat type, using the integrated sampling procedure in 6602, will be run.

(2) Field Inventories

(a) Determine the wildlife distribution and relative population estimates of terrestrial wildlife species based upon habitat types using 6602.

(b) Identify the distribution of important habitat types that provide essential elements (food, cover, water) for big game species, endangered, threatened or sensitive species.

(c) Special consideration will be given to these species which are threatened, sensitive, or endangered and unusual species that might inhabit the ES area and particularly their habitat requirements.

b. Specific

(1) A review of published literature to determine:

(a) A listing of each of the following major classes of vertebrates by season of use, habitat type occurrence, and relative abundance inhabiting the ES area:

Mammals
Birds
Reptiles
Amphibians

(b) A listing of the habitat requirements for these vertebrate wildlife species.

(c) A listing of endangered invertebrate wildlife species and their habitat associations.

(d) A listing of vertebrate wildlife species which are known to have a preference for riparian habitat and/or ephemeral vegetation.

(e) A bibliography of the literature cited.

(2) Conduct a fecal analysis by:

(a) Analyze 2,000 fecal samples in each ES area. The fecal samples collected shall be from mule deer, antelope, javelina, and cattle. Samples for wildlife and livestock shall be collected in the same habitat type and in the immediate vicinity of the other samples. Samples shall be collected in the more important habitat types identified in the habitat inventory (6602). Samples shall be collected at least ~~four~~ times a year, i.e. ~~early-and~~ late winter, spring green-up, summer, for each habitat type.

(b) Five microscopic slides shall be made from each sample, and quantified for 100 fields per sample. Fecal analysis work is to be accomplished according to the technique identified by Sparks and Malechek (1968). 1/

(3) Field Inventories

(a) Concentration areas in riparian habitat types (riparian habitat types are defined as:

1/ Sparks, D. R. and Malechek, J. C. (1968). Estimating percentage dry weight in diets using microscope technique. J. Range Management. 21:264-265.

The vegetation and faunal environment associated with surface or sub-surface water.

In some cases riparian habitat is a narrow band of vegetation a few feet wide along a stream to several hundred feet wide in the stream flood-plain. These riparian types will also be surveyed in accordance with 6602.

(b) Collect and make two study skins or mounts of each unusual vertebrate species found. These study skins or mounts will be given to the Bureau.

(c) Develop a checklist for the following: birds, mammals, amphibians and reptiles.

Common and Scientific Name	Occur-rence	RElative Abundance	**Occur-rences by Habitat Type	Nesting in Areas Season + = do nest of use - do not	Identify status Fed. Endgr.Species List and/or AGFD Threatened Species List

Legend

A. Confirmed record of occurrence as evidenced by museum speciments or sightings by qualified personnel.

B. Probable occurrence; incomplete or weak evidence.

C. Possible occurrence; probability, however, is of non-occurrence.

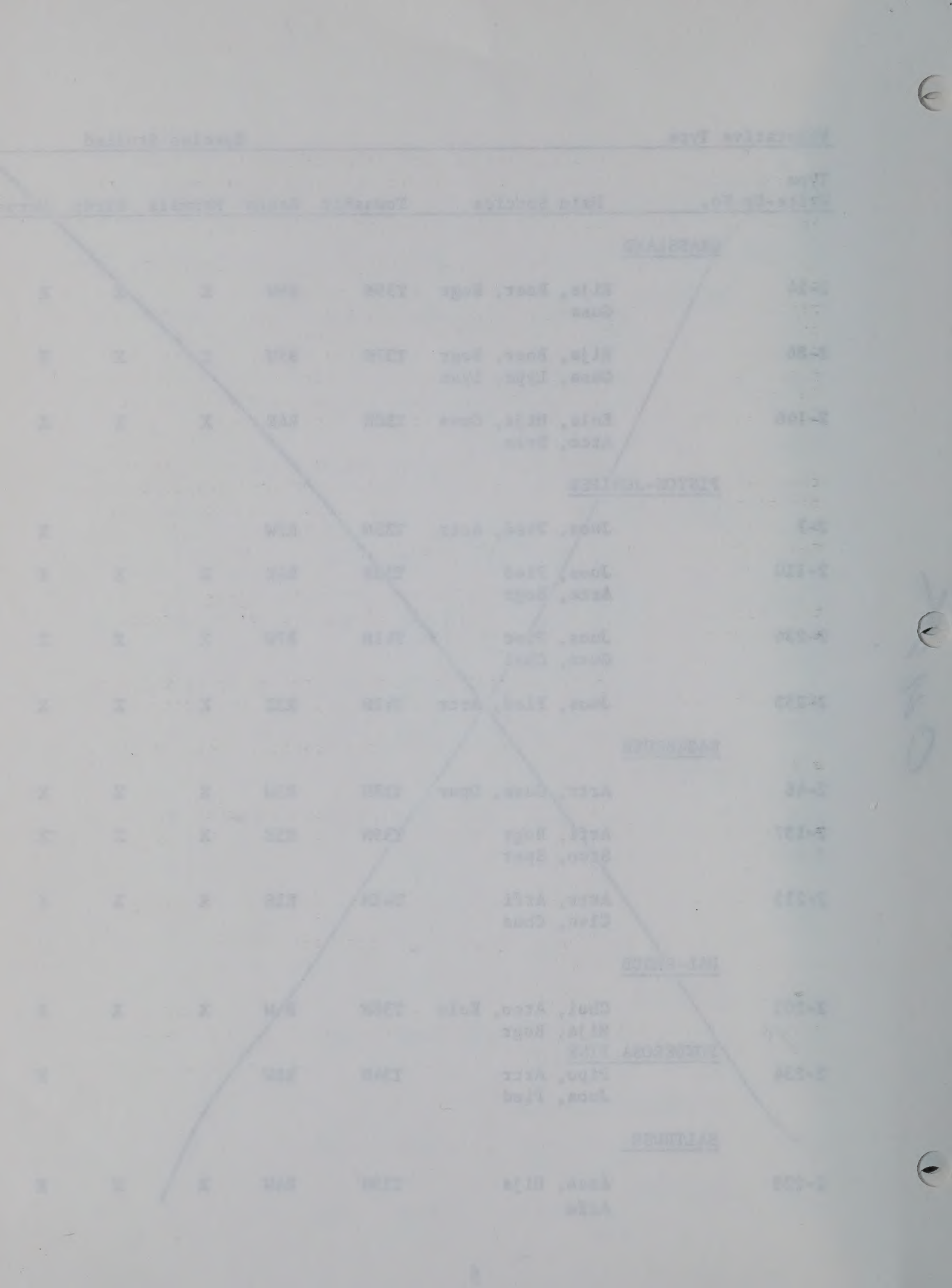
*a = abundant
c = common
o = occasional
r = rare
u = status unknown
e = endangered

**Habitat type will be denoted by using co-dominant species abbreviations, i.e., sagebrush, Artemisia spp; Fourwing saltbush, Atriplex canescens as Artem - Atrip.

(d) Conduct transects for 6602 in the following habitat types:

Habitat Type				Species Studied		
Type Write-Up No.	Main Species	Township	Range	Mammals	Birds	Herps
	GRASSLAND					
2-24	Hija, Boer, Bogr Gusa	T39N	R9W	X	X	X
2-36	Hija, Boer, Bogr Gusa, Lypa, Lyan	T37N	R7W	X	X	X
2-146	Eula, Hija, Gusa Atco, Brte	T38N	R4E	X	X	X
	PINYON-JUNIPER					
2-7	Juos, Pied, Artr	T35N	R7W			X
2-110	Juos, Pied Artr, Bogr	T39N	R4E	X	X	X
2-236	Juos, Pied Gusa, Chvi	T41N	R7W	X	X	X
2-253	Juos, Pied, Artr	T41N	R3E	X	X	X
	SAGEBRUSH					
2-46	Artr, Gusa, Opur	T38N	R3W	X	X	X
2-137	Arfi, Bogr Stco, Sper	T39N	R5E	X	X	X
2-215	Artr, Arfi Clva, Chua	T41N	R1E	X	X	X
	HAL-SHRUB					
2-205	Chui, Atco, Eula Hija, Bogr	T38N	R4W	X	X	X
	PONDEROSA PINE					
2-234	Pipo, Artr Juos, Pied	T34N	R8W			X
	SALTBRUSH					
2-223	Atco, Hija Arfe	T39N	R4W	X	X	X

Vegetative Type				Species Studied		
Type Write-Up No.	Main Species	Township	Range	Mammals	Birds	Herps
GRASSLAND						
2-24	Hija, Boer, Bogr Gusa	T39N	R9W	X	X	X
2-36	Hija, Boer, Bogr Gusa, Lypa, Lyan	T37N	R7W	X	X	X
2-146	Eula, Hija, Gusa Atco, Brte	T38N	R4E	X	X	X
PINYON-JUNIPER						
2-7	Juos, Pied, Artr	T35N	R7W			X
2-110	Juos, Pied Arte, Bogr	T39N	R4E	X	X	X
2-236	Juos, Pied Gusa, Chvi	T41N	R7W	X	X	X
2-253	Juos, Pied, Artr	T41N	R3E	X	X	X
SAGEBRUSH						
2-46	Artr, Gusa, Opur	T38N	R3W	X	X	X
2-137	Arfi, Bogr Stco, Sper	T39N	R5E	X	X	X
2-215	Artr, Arfi Clva, Chua	T41N	R1E	X	X	X
HAL-SHRUB						
2-205	Chui, Atco, Eula Hija, Bogr	T38N	R4W	X	X	X
PONDEROSA PINE						
2-234	Pipo, Artr Juos, Pied	T34N	R8W			X
SALTBUSH						
2-223	Atco, Hija Arfe	T39N	R4W	X	X	X



(e) Conduct avian inventories in the above habitat types, determine nesting density, migrating periods, occurrence and presence by habitat type. In the Vermillion ES area, avifauna inventories will only consider the area north of T36 North.

(i) Species composition, relative abundance of all birds present in the ES area by season, type of use and habitat preference. Conduct standard bird nesting surveys for five predominate bird species, in three separate areas, within each of the major Associations by Kuchler or Brown & Lowe vegetation map of Arizona 1973, e.g., Juniper-pinon woodland, Great Basin Sagebrush, Interior Chaparral, Soronan Desert, and Mohave Desert. Method to be used will be the International Bird Plot Censusing Method. (Copy attached)

(ii) Special consideration shall be given to assure that habitat types are accurately inventoried for endangered, threatened, peripheral and sensitive species and their habitat, and threatened species listed by the Arizona Game and Fish Department. Both field and non-game bird specialist will be consulted.

(iii) Special areas, including areas which have been withdrawn, designated or specially identified for protection or enhancement of a wildlife species.

(iv) Habitat problems or problem areas which are or could create a limiting influence in the wildlife populations.

(v) Identification of competition between livestock and wildlife species.

(vi) All habitat types used as raptor habitat shall receive special emphasis. The emphasis shall include, but not be limited to:

Identification of specific nesting sites for rare species.

Primary habitat types, unique areas that are utilized by each species during the nesting season.

Concentration areas for raptors in winter; with emphasis on bald eagles, prairie falcons, peregrine falcons, golden eagles, ferruginous hawks, and roughlegged hawks.

Location of any sightings of unusual raptors for this area such as black hawks, osprey, red-shouldered hawks, broad-wing hawk, zone-tailed hawk will be mapped.

Determine relative abundance (approximately state in population cycle) of primary prey base utilized by each species and different seasons.

(f) Conduct mammalian inventories in the above habitat types to determine occurrence by habitat type for each of the following species: Mule deer, javelina, antelope; small game including rabbits; fur bearers including coyotes, bobcat, badger, racoon, mink; and non-game mammals. Smaller mammals shall be surveyed by trapping.

(i) Including limiting habitat factors, season of use, important use areas, identification of distribution of important food, water, cover and space.

(ii) Concentration areas by habitat type, especially those which are necessary to sustain the existence and/or perpetuation of a wildlife species at critical periods of the life cycles or those factors needed to maintain a healthy wildlife population with emphasis on large or mobile species.

(iii) Items (3)(c)(iii), (iv) and (v)

(g) Conduct reptile and amphibian inventories in the above habitat types to determine occurence by habitat type. Collect the same information as required by (f)(mammals) above. Special emphasis will be given to habitat types for: Gila monster and Desert tortoise.

(4) Assess the overall importance of wildlife with emphasis on riparian habitat and dependent species.

(5) Recommend modifications of planned or existing livestock facilities to protect or enhance wildlife species.

c. Materials furnished by the Bureau

(1) Copy of International Bird Plot Census Method.

(2) Provide assistance in selection of specific transect areas listed in III.A.1a(3)(c) above.

(3) Orthophoto quads scale 1:24000 or USGS - 7.5 minute quads that will be utilized for delineating habitat types.

(4) Original copies of the forms needed to collect habitat type and unique area write-ups to be reproduced by the contractor.

(5) Copy of Habitat Analysis System (Draft Manual 6602), Kuchler map and Kuchler Manual.

(6) Base map of ES area, scale 2 inches to the mile.

d. Material furnished by the contractor

(1) Copy of Brown & Lowe vegetation map of Arizona, 1973.

(2) Write-up sheets for each habitat type surveyed that includes draft manual forms 6601,6602, and 6603.

(3) A copy of each International Bird Plot Censusing Method utilized per association and a map of the location of each.

(4) Mylar over-lays and orothophoto quads and USGS quads used to obtain the field information which delineate the habitat types and information required in ~~5020~~ 6602

(5) A copy of the procedures utilized to determine the species present by habitat type (field procedure, review of literature, etc.) and a copy of the field data collected by censusing or contact with various state and federal agencies.

(6) A copy of each mammal trap line transect.

(7) Recommendation for modification of planned or existing livestock facilities to protect or enhance wildlife species.

2. Deliverables

a. The contractor shall complete all field research, studies and/or inventories by August 15, 1977.

b. Quarterly reports will be submitted to the Contracting Office within 45 days following each three month period of the contract. These quarterly reports shall discuss the status of the contract to date and the findings to date.

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

c. The contractor shall submit all draft reports in the prescribed format to the Contracting Officer at BLM, 2400 Valley Bank Center, Phoenix, Arizona (85073), no later than 45 calendar days following the assigned completion data for all field work. These reports shall include all information gathered and conclusions drawn during the contract work. The Contracting Officer shall review the draft and return all reports to the contractor with any suggested changes within 30 calendar days after receipt.

d. The contractor shall deliver the original and 20 copies of all final reports, written in the prescribed format, to the Contracting Office no later than 60 calendar days following receipt of the returned draft report from the Contracting Officer.

e. Any original graphs, charts, tables, illustrations, photographs (including negatives and slides), and raw data write-up sheets shall be submitted to the Contracting Office along with the final reports.

3. COAR/Contractor Coordination - The contractor shall notify the COAR each time the contractor plans to go into the field to collect data.

IV. Government Cost Estimate

Vermillion EIS Area [1/]

Line Item	FY 1976	FY 1977	Total
Salaries			
Professional personnel full time and part time.	10,000 [2/]	15,000 [3/]	25,000
Student hourly, part time	3,000	4,500	7,500
Fringe benefits for professional personnel - 17%	1,700	2,550	4,250
1% Workmen's Compensation for part time employees	30	45	75

	FY 76	FY 77	Total
Operations			
Housing	700	1,200	1,900
Food	3,000	4,500	7,500
Travel	2,000	3,000	5,000
Supplies			
Reagents, batteries, cathode lamps, compressed gases, etc.	3,000	5,000	8,000
Services			
Publication of report	1,000	3,000	4,000
Indirect Costs (36% Total Direct Costs less Capital)	8,795	13,966	22,761
TOTAL	33,225	52,761	85,986

1/ All costs of categories from fringe benefits on were based upon costs for similar contract proposals submitted by Arizona State University and University of Arizona this fiscal year.

2/ $10,000 includes 6 MMs of PhD and 6 MMs of a part-time position.

3/ $15,000 includes 9 MMs of a PhD and 9 MMs of a part-time position.

V. Funding Code

1461109 - Management of Lands and Resources

AZ-930-1220-2025

VI. Contracting Officers' Authorized Representative

The following personnel are designated as the Contracting Officer's Authorized Representative (COAR).

Vermillion - Melvin Wilhelm, Arizona Strip District (801-673-3545)

The COAR is responsible for giving technical advice, answering technical questions and reviewing contractor's submissions. The COAR has no authority to modify the written terms of this contract.

VII. Potential Bidders

Name and address of potential bidders.

Name	Address	Vermillion
Arizona State University	Tempe, Arizona 85281	X
University of Arizona	Tucson, Arizona 85721	X
Northern Arizona University	Flagstaff, AZ. 86001	X
Arizona Game & Fish Dept.	2222 W. Greenway Rd. Phoenix, AZ. 85023	X
U.S. Fish & Wildlife Service	500 Gold Ave.,S.W. Albuquerque, New Mexico 87102	X
Dixie College	St. George, Utah 84770	X
Environmental Contractors in Arizona		X
Northern Arizona Museum	Flagstaff, AZ. 86001	X

VIII. Solicitation Evaluation

Evaluation Factor	Possible Points	Score 1st	Score Final
A. Technical and Scientific	80		
1. Application of EAR/ES Approach	10		
2. Soundness of approach			
a. Study/Inventory Methods	15		
b. Study/Inventory Applications	10		
c. Study/Inventory Presentation	10		
3. Compliance with requirements of the Statement of Work	10		
4. Special Factors			
a. Understanding Federal and State Endangered and Threatened Species Legislation	10		
b. Understanding of BLM Manuals 6602 and 4411	10		
c. Equipment Capabilities for Baseline Studies/Inventories	5		
B. Past Experiences	50		
1. Endangered Species Work	10		
2. EAR/ES Contract Work	10		
3. Wildlife work for State	10		
4. Wildlife work for universities and subcontracting experiences	10		
5. Wildlife work International Scope	5		
6. Sikes Act work	5		

	Possible Points	Score 1st	Score Final
C. Personnel Qualifications	50		
1. Expertise in Avian Ecology	10		
2. Expertise in Mammal Ecology	10		
3. Expertise in Amphibian, Reptiles and Entomology Ecology	10		
4. Knowledge of Wildlife Baseline Study/Inventory Design and application	10		
5. Knowledge of Endangered Species Life Histories and Management	10		

IX. Evaluating Personnel

Arizona will furnish three to five persons to review the solicitations.

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225